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LOWE HAUPTMAN HAM & BERNER, LLP
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ALEXANDRIA, VA 22314

EXAMINER

HAND, MELANIE JO

ART UNIT	PAPER NUMBER
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3761

MAIL DATE	DELIVERY MODE
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12/20/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/673,260

Applicant(s)

MITSUI ET AL.

Examiner

Melanie J. Hand

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 October 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-5,8-11,15 and 21-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-5,8-11,15 and 21-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>10/11/07</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1, 3-5, 8-11, 15 and 21-31 have been considered but are moot in view of the new ground(s) of rejection.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on October 11, 2007 was filed after the mailing date of the non-final action on June 11, 2007. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
4. Claims 1, 3-5, 8-11 and 21-30 rejected under 35 U.S.C. 103(a) as being unpatentable over Suekane et al (JP 11-276524) in view of any one of Gesp (U.S. Patent No. 5,057,097), Borgers et al (U.S. Patent No. 4,795,456 and Pape et al (U.S. Patent No. 4,778,701).

With respect to **claim 1**: Suekane teaches a disposable diaper 1, comprising: a diaper main body 5 including a top sheet in the form of liquid permeability surface sheet 2, a back sheet in the form of non-liquid permeable rear-face sheet 3 and an absorbent body in the form of absorbent core 4 disposed between said top sheet 2 and back sheet 3. Diaper 1 also comprises a pair of side flaps in the form of tape members 10 respectively extending outwardly from

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respective side edge portions in a lateral direction of said diaper main body, the side flaps being disposed between said top sheet 2 and back sheet 3. Fixing tape fastener 9 has a hook member 15 and is disposed in proximity of an outermost lateral edge of each of the side flaps 10 extending outwardly. An engaging region 20 defined by the bounds of a hole 23 is provided on each said side flap 10 to engage the respective fixing tape 9 with said side flap 10 through the hook member 15 wherein said engaging region comprises (a) an engaging portion in the form of adhesive 20 engageable with said hook member 15, and (b) a non-engaging portion shown in Fig. 2 and defined by the outer surface of front sheet 2 with which said hook member can barely be engaged or cannot be engaged at all and which comprises a nonwoven fabric inherently and necessarily having a low engaging force with said hook member inasmuch as the hook member is shown as merely lying on top of the nonwoven fabric in the non-engaging region.

Suekane does not explicitly teach that an entire area of said engaging portion 20 is in a range of 5 % to 50 % of the entire area of said hook member. However, since Suekane teaches that the hole 23 is large enough for the hook member 15 to engage binder 15 and "may be plural" i.e. there may be more than one hole, it would be obvious to one of ordinary skill in the art to modify the article of Suekane such that the entire area of said engaging portion is in the range of 5-50% of the entire area of said hook member with a reasonable expectation of success to ensure that the hook member sufficiently engages the engaging region. If there is a design need or a market pressure to solve a problem (in this case provide a secure tape fastener that can engage the same respective part of a diaper it extends from), and there are a finite number of identified, predictable solutions (in this case the entire area of the engaging region that will meet the conditions taught by Suekane for ensuring engagement of hook member 15), a person of ordinary skill in art has good reason to pursue known options within his

or her technical grasp, and if this leads to anticipated success, it is likely product of ordinary skill and common sense, not innovation. See *KSR International Co. v. Teleflex Inc.*, 82 USPQ2d 1385 (U.S. 2007) The fixing tape 9 comprises (i) a fixing tape substrate in the form of base 21 and (ii) said hook member 15 provided on a surface of said fixing tape substrate 21. The non-engaging portion comprises a temporary fixing portion, as disclosed, of said fixing tape 9 in the form of the portion of hook member 15 that does not engage engaging portion 20 upon application of a pressing force against said engaging region. However, as a result of that pressing force, the portion of hook member 15 that does not engage engaging region 20 is temporarily fixed to the non-engaging region.

Suekane does not explicitly teach that the fixing tape substrate 21 comprises a nonwoven fabric having a low engaging force with said hook member. However Suekane teaches that base member 21 is attached to tape member 10 by hot melt adhesive. Hot melt adhesives provide a more effective bond when they are used with similar materials in web form, such as a polypropylene adhesive and a polypropylene film as the base member 21. Therefore it would be obvious to one of ordinary skill in the art to modify the article of Suekane such that fixing tape substrate 21 comprises a nonwoven fabric such as a thermoplastic film to ensure increased securement of the substrate 21 to the tape member 10. Such a fabric would inherently and necessarily have a low engaging force with said hook member 15, as the fabric of substrate 21 does not contain any means for engaging said hook member 15, only attaching the hook member thereto by externally provided means.

Suekane does not teach that each of said side flaps 10 comprising an elastic sheet sandwiched between upper and lower non-woven fabric layers. However, such elastic composite side flaps or adhesive fastener substrates are well known in the art as supported by Gesp, Borgers and Pape and allow stretching by the user to provide a more comfortable fit.

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Therefore it would be obvious to one of ordinary skill in the art to modify the article of Suekane such that the side flaps are comprised of an elastic sheet sandwiched between upper and lower non-woven fabric layers with a reasonable expectation of success to provide a stretchable side flap that allows a more comfortable fit for the wearer.

With respect to **claim 3**: The fixing tape substrate 21 is provided with a gripping portion at an end thereof (shown generally at item 9 in Fig. 2) and an attaching portion (hook member 15) at the opposite end thereof, said attaching portion being attached to the respective side flap via said substrate 21.

With respect to **claim 4**: Suekane does not explicitly teach the engaging force of said engaging region with said hook member is in a range of 0.3 N/25mm to 2.2 N/25mm. Suekane teaches that the engaging portion comprises adhesive. Since adhesives and loop members, which are disclosed by applicant for the claimed engaging region are well known equivalents of one another as suitable engaging material for a hook member, it would be obvious to one of ordinary skill in the art to modify the article of Suekane such that engaging portion 20 instead comprises loop material. It has been held that if a person of ordinary skill in the art can implement a predictable variation, 35 U.S.C. 103 likely bars its patentability. See *KSR International Co. v. Teleflex Inc.*, 82 USPQ2d 1385 (U.S. 2007) The article fairly suggested by Suekane would then render the claimed engaging force range, as the article suggested by Suekane discloses a hook member as claimed and an engaging portion material as disclosed.

With respect to **claim 5**: Suekane does not explicitly teach the engaging force of said engaging region with said hook member is in a range of not greater than 2.2 N/25mm. Suekane teaches

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that the engaging portion comprises adhesive. Since adhesives and loop members, which are disclosed by applicant for the claimed engaging region, are well known equivalents of one another as suitable engaging material for a hook member, it would be obvious to one of ordinary skill in the art to modify the article of Suekane such that engaging portion 20 instead comprises loop material. It has been held that if a person of ordinary skill in the art can implement a predictable variation, 35 U.S.C. 103 likely bars its patentability. See *KSR International Co. v. Teleflex Inc.*, 82 USPQ2d 1385 (U.S. 2007) The article fairly suggested by Suekane would then render the claimed engaging force range, as the article suggested by Suekane discloses a hook member as claimed and an engaging portion material as disclosed.

With respect to **claim 8**: The hook member of said fixing tape 9 is not a male engaging piece of a hook-and-loop fastener. However, as stated with respect to claim 5, Suekane fairly suggests an engaging region comprising loop material rather than adhesive, thus the hook material in the article fairly suggested by Suekane is a male engaging piece of a hook and loop fastener that comprises hook member 15 and engaging region 20.

With respect to **claim 9**: The fixing tape 9 comprising base member 21 and hook member 15 is attached to a surface of said side flap 10 and is considered herein to be foldable along the outermost lateral edge of said side flap, in such a manner that said hook member 15 faces said surface of said side flap 15 as can be seen in Fig. 2, so as to be temporarily fixed to said surface of said side flap in a manner where said hook member 15 achieves engagement with said engaging region 20 when said fixing tape 9 is folded back.

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With respect to **claim 10**: The fixing tape 9 is attached to said side flap 10 in such a manner that said hook member 15 opposes a surface of said side flap 10 whereon engaging region 20 lies (Fig. 2), so that said fixing tape 9 is temporarily fixed to said surface of said side flap 10 in manner where said hook member 15 achieves engagement with said engaging region 20.

With respect to **claim 11**: The fixing tape 9 is attached to one of opposite surfaces of said side flap 10 and is considered herein to be inherently and necessarily foldable along the outermost lateral edge of said side flap 10 as seen in Fig. 2, in such a manner that said hook member 15 faces the other one of said opposite surfaces of the side flap, so as to be temporarily fixed to said other surface of said side flap in a manner where said hook member 15 achieves engagement with said engaging region 20 after said fixing tape is folded back.

With respect to **claim 21**: Suekane teaches a disposable diaper 1, comprising: a diaper main body 5 including a top sheet in the form of liquid permeability surface sheet 2, a back sheet in the form of non-liquid permeable rear-face sheet 3 and an absorbent body in the form of absorbent core 4 disposed between said top sheet 2 and back sheet 3. Diaper 1 also comprises a pair of side flaps in the form of tape members 10 respectively extending outwardly from an end portion in a lateral direction of said diaper main body. A pair of fixing tapes 9 each being attached to one of said side flaps 10 in a vicinity of an outermost lateral edge (free edge 17) of said side flap 10. Fixing tapes 9 are provided with a hook member 15. An engaging region 20 defined by the bounds of a hole 23 is provided on each said side flap 10 to temporarily fix the respective fixing tape 9 with said side flap 10 before use through the hook member 15. The engaging region 20 comprises (a) an engaging portion in the form of adhesive 20 engageable with said hook member 15, and (b) a non-engaging portion (shown in Fig. 2) of the material of

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front sheet 2 inherently and necessarily having a low engaging force or no engaging force with said hook member due to the lack of any engaging material present that is capable of engage said hook member 15.

Suekane does not explicitly teach that an entire area of said engaging portion 20 is in a range of 5 % to 50 % of the entire area of said hook member. However, since Suekane teaches that the hole 23 is large enough for the hook member 15 to engage binder 15 and "may be plural" i.e. there may be more than one hole, it would be obvious to one of ordinary skill in the art to modify the article of Suekane such that the entire area of said engaging portion is in the range of 5-50% of the entire area of said hook member with a reasonable expectation of success to ensure that the hook member sufficiently engages the engaging region. If there is a design need or a market pressure to solve a problem (in this case provide a secure tape fastener that can engage the same respective part of a diaper it extends from), and there are a finite number of identified, predictable solutions (in this case the entire area of the engaging region that will meet the conditions taught by Suekane for ensuring engagement of hook member 15), a person of ordinary skill in art has good reason to pursue known options within his or her technical grasp, and if this leads to anticipated success, it is likely product of ordinary skill and common sense, not innovation. See *KSR International Co. v. Teleflex Inc.*, 82 USPQ2d 1385 (U.S. 2007)

The fixing tape 9 comprises (i) a fixing tape substrate in the form of base 21 and (ii) said hook member 15 provided on a surface of said fixing tape substrate 21. The non-engaging portion comprises a temporary fixing portion, as disclosed, of said fixing tape 9 in the form of the portion of hook member 15 that does not engage engaging portion 20 upon application of a pressing force against said engaging region. However, as a result of that pressing force, the

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portion of hook member 15 that does not engage engaging region 20 is temporarily fixed to the non-engaging region.

Suekane does not explicitly teach that the fixing tape substrate 21 comprises a nonwoven fabric having a low engaging force with said hook member. However Suekane teaches that base member 21 is attached to tape member 10 by hot melt adhesive. Hot melt adhesives provide a more effective bond when they are used with similar materials in web form, such as a polypropylene adhesive and a polypropylene film as the base member 21. Therefore it would be obvious to one of ordinary skill in the art to modify the article of Suekane such that fixing tape substrate 21 comprises a nonwoven fabric such as a thermoplastic film to ensure increased securement of the substrate 21 to the tape member 10. Such a fabric would inherently and necessarily have a low engaging force with said hook member 15, as the fabric of substrate 21 does not contain any means for engaging said hook member 15, only attaching the hook member thereto by externally provided means.

Suekane does not teach that each of said side flaps 10 comprising an elastic sheet and a non-woven fabric layer joined to the elastic sheet and adapted to face a wearer's body in use. However, such elastic composite side flaps or adhesive fastener substrates are well known in the art as supported by Gesp, Borgers and Pape and allow stretching by the user to provide a more comfortable fit. Therefore it would be obvious to one of ordinary skill in the art to modify the article of Suekane such that the side flaps are comprised of an elastic sheet sandwiched between upper and lower non-woven fabric layers with a reasonable expectation of success to provide a stretchable side flap that allows a more comfortable fit for the wearer.

With respect to **claim 22**: The fixing tape substrate 21 is provided with a gripping portion at an end thereof (shown generally at item 9 in Fig. 2) and an attaching portion (hook member 15) at

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the opposite end thereof, said attaching portion being attached to the respective side flap via said substrate 21.

With respect to **claim 23**: Suekane does not explicitly teach the engaging force of said engaging region with said hook member is in a range of 0.3 N/25mm to 2.2 N/25mm. Suekane teaches that the engaging portion comprises adhesive. Since adhesives and loop members, which are disclosed by applicant for the claimed engaging region are well known equivalents of one another as suitable engaging material for a hook member, it would be obvious to one of ordinary skill in the art to modify the article of Suekane such that engaging portion 20 instead comprises loop material. It has been held that if a person of ordinary skill in the art can implement a predictable variation, 35 U.S.C. 103, likely bars its patentability. See *KSR International Co. v. Teleflex Inc.*, 82 USPQ2d 1385 (U.S. 2007) The article fairly suggested by Suekane would then render the claimed engaging force range, as the article suggested by Suekane discloses a hook member as claimed and an engaging portion material as disclosed.

With respect to **claim 24**: Suekane does not explicitly teach the engaging force of said engaging region with said hook member is in a range of not greater than 2.2 N/25mm. Suekane teaches that the engaging portion comprises adhesive. Since adhesives and loop members, which are disclosed by applicant for the claimed engaging region are well known equivalents of one another as suitable engaging material for a hook member, it would be obvious to one of ordinary skill in the art to modify the article of Suekane such that engaging portion 20 instead comprises loop material. It has been held that if a person of ordinary skill in the art can implement a predictable variation, 35 U.S.C. 103, likely bars its patentability. See *KSR International Co. v. Teleflex Inc.*, 82 USPQ2d 1385 (U.S. 2007) The article fairly suggested by Suekane would then

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render the claimed engaging force range, as the article suggested by Suekane discloses a hook member as claimed and an engaging portion material as disclosed.

With respect to **claim 25**: The hook member of said fixing tape 9 is not a male engaging piece of a hook-and-loop fastener. However, as stated with respect to claim 5, Suekane fairly suggests an engaging region comprising loop material rather than adhesive, thus the hook material in the article fairly suggested by Suekane is a male engaging piece of a hook and loop fastener that comprises hook member 15 and engaging region 20.

With respect to **claim 26**: The fixing tape 9 comprising base member 21 and hook member 15 is attached to an inner surface of said side flap 10 and is considered herein to be foldable along the outermost lateral edge of said side flap, in such a manner that said hook member 15 faces said surface of said side flap 15 as can be seen in Fig. 2, so as to be temporarily fixed to said surface of said side flap in a manner where said hook member 15 achieves engagement with said engaging region 20 when said fixing tape 9 is folded back.

With respect to **claim 27**: The fixing tape 9 is attached to said side flap 10 in such a manner that said hook member 15 opposes a surface of said side flap 10 whereon engaging region 20 lies (Fig. 2), so that said fixing tape 9 is temporarily fixed to said surface of said side flap 10 in manner where said hook member 15 achieves engagement with said engaging region 20.

With respect to **claim 28**: The fixing tape 9 is attached to an outer surface of said side flap 10 and is considered herein to be inherently and necessarily foldable along the outermost lateral edge of said side flap 10 as seen in Fig. 2, in such a manner that said hook member 15 faces

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an opposite inner surface of the side flap, so as to be temporarily fixed to said other surface of said side flap in a manner where said hook member 15 achieves engagement with said engaging region 20 after said fixing tape is folded back.

With respect to **claim 29**: The non-engaging portion of hook member 15 of said engaging region is formed on the fixing tape 9.

With respect to **claim 30**: The engaging portion in said engaging region 20 is formed on said inner surface of said side flap 10. (Fig. 2)

5. Claims 15 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suekane et al (JP 11-276524) in view of any one of Gesp (U.S. Patent No. 5,057,097), Brogers et al (U.S. Patent No. 4,795,456 and Pape et al (U.S. Patent No. 4,778,701), as applied to claims 1, 3-5, 8-11 and 21-30 above, and further in view of Tanzer et al (U.S. Patent No. 6,730,069).

With respect to **claims 15,31**: The fixing tape substrate 21 is provided with a gripping portion at an end thereof (shown generally at item 9 in Fig. 2) and an attaching portion (hook member 15) at the opposite end thereof, said attaching portion being attached to the respective side flap via said substrate 21.

Suekane does not teach that said fixing tape is provided with an opening in said attaching portion, a portion of said surface of said side flap being exposed through said opening and mechanically engageable with said hook member 15 when said fixing tape is folded back. Tanzer teaches a fastener comprising a first flexible layer 72 comprised of a stretchable

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laminate of nonwoven material and a second flexible layer 78 attached to the first flexible layer. The first flexible layer contains islands of fastener material and the second flexible layer contains openings 80 corresponding to the location and size of each island located in an area of said fastener that is considered herein to be an attaching region. Tanzer teaches that the openings allow for exposure of the fastener island 64, therefore it would be obvious to one of ordinary skill in the art to modify the tab fastener of the combined teaching of Fries and Kuen so as to contain openings in an attaching region as taught by Tanzer. ('069, Col. 9, line 67, Col. 10, lines 1,2, Col. 12, lines 57-65). The combined teaching of Fries and Kuen and Tanzer thus teaches a portion of said surface of said side flap being exposed through said opening and engageable with said hook member when said fixing tape is folded back.

Conclusion

6. Applicant's submission of an information disclosure statement under 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17(p) on October 11, 2007 prompted the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 609.04(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melanie J. Hand whose telephone number is 571-272-6464. The examiner can normally be reached on Mon-Thurs 8:00-5:30, alternate Fridays 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tatyana Zalukaeva can be reached on 571-272-1115. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Melanie J Hand
Examiner
Art Unit 3761

December 16, 2007

TATYANA ZALUKAEVA
SUPERVISORY PRIMARY EXAMINER

